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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/739,387	12/19/2000	Toshihiro Uehara	Q62300	3310

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SUGHRUE, MION, ZINN, MACPEAK & SEAS  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3202

14  
EXAMINER

IP, SIKYIN

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/739,387

Applicant(s)

UEHARA ET AL.

Examiner

Sikyin Ip

Art Unit

1742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 May 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 U.S.C. § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:  
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
2. Claims 1-29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.
3. The expression "a hardness not less than Hv 502" in claims 1, 11, 24, and 25 is not supported by the specification originally filed. A point in the Table does not support the open range which includes hardness not disclosed in the specification as originally filed. In response to this office action, applicants are required to point out support for this expression or delete said expression.

### *Claim Rejections - 35 U.S.C. § 103*

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-7, 11-16, and 22-29 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 5538683 to Pinnow et al (PTO-1449, col. 3, lines 3-16).

7. The cited reference(s) disclose(s) the features including the claimed maraging steel alloy composition. The difference between the reference(s) and the claims are as follows: cited reference does not disclose all claimed optional elements, but said elements have contents read on zero which suggests said elements could be eliminated from instant claims. Therefore, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the subject matter disclosed by the reference. Overlapping ranges have been held to be a prima facie case of obviousness, See MPEP § 2112.01, In re Best, 195 USPQ 430, In re Malagari, 182 USPQ 549, In re Titanium Metals Corporation of America v. Banner, 227 USPQ 773 (Fed. Cir. 1985), In re Woodruff, 16 USPQ 2d 1934, and In re Wertheim, 541 F.2d 257, 191 USPQ

90 (CCPA 1976).

8. With respect to the claimed Co content not more than 6.9 wt.% is found no difference from 7 wt.% as disclosed by cited reference because it is well settled that a prima facie case of obviousness would exist where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985) and *In re Woodruff*, 16 USPQ 2d 1934.

9. With respect to the formula in term of claimed elements, that it is well settled that there is no invention in the discovery of a general formula if it covers a composition described in the prior art, *In re Cooper and Foley* 1943 C.D. 357, 553 O.G. 177; 57 USPQ 117, *Taklatwalla v. Marburg*, 620 O.G. 685, 1949 C.D. 77, and *In re Pilling*, 403 O.G. 513, 44 F(2) 878, 1931 C.D. 75. In the absence of evidence to the contrary, the selection of the proportions of elements would appear to require no more than routine investigation by those ordinary skilled in the art. *In re Austin, et al.*, 149 USPQ 685, 688.

10. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over reference as applied to claims 1-6 and 11-16 above, and further in view of Whitaker.

11. The claimed subject matter as is disclosed and rejected above by the cited

reference(s) except for the claimed grain size. However, Whitaker in the abstract teaches refined grain size would improve maraging steel strength and ductility in the same field of endeavor or the analogous metallurgical art. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to refine grain size as taught by Whitaker in order to improve/provide maraging steel strength and ductility. In re Venner, 120 USPQ 193 (CCPA 1958), In re LaVerne, et al., 108 USPQ 335, and In re Aller, et al., 105 USPQ 233.

12. Claims 8-10 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over references as applied to claims above, and further in view of JP 62080225 (abstract) or JP 63026345 (abstract).

13. The claimed subject matter as is disclosed and rejected above by the cited reference(s) except for nitriding and residual compression stress. However, JP 62080225 or JP 63026345 teaches residual compression stress would be induced by nitriding in the same field of endeavor or the analogous metallurgical art for the purpose of improve bending fatigue strength. Therefore, it would have been obvious to one having ordinary skill in the art of the cited references at the time the invention was made to nitride the maraging steel as taught by JP 62080225 or JP 63026345 in order to improve/provide the fatigue strength. In re Venner, 120 USPQ 193

(CCPA 1958), *In re LaVerne, et al.*, 108 USPQ 335, and *In re Aller, et al.*, 105 USPQ 233.

*Response to Arguments*

14. Applicant's arguments filed May 27, 2003 have been fully considered but they are not persuasive.

15. Applicants argue that alloy of Pinnow does not contain Si, Mn, or Ti. But, the instant claimed Si, Mn, or Ti content reads on zero which suggests said elements could be eliminated from claimed alloy.

16. Applicants argue that the claimed Co content not more than 6.9 wt.% is outside the 7 wt.% as disclosed by Pinnow. But, as is evinced by applicants' argument that there is no difference in hardness value. It is well settled that a prima facie case of obviousness would exist where the claimed ranges and prior art do not overlap but are close enough that one skilled in the art would have expected them to have the same properties, *In re Titanium Metals Corporation of America v. Banner*, 227 USPQ 773 (Fed. Cir. 1985) and *In re Woodruff*, 16 USPQ 2d 1934.

17. Applicants argue that the claimed N content is much lower than the N content as disclosed by Pinnow. But, the claimed N content is within the teaching of Pinnow.

18. Applicants argue that the claimed low N and O contents are critical for fatigue

strength. But, unexpected results must be established by factual evidence. Mere argument or conclusory statements in the specification is not sufficient. In re Geisler, 116 F.3d at 1470. Comparison must be done under identical condition except for the novel features of the invention. In re Brown, 173 USPQ 685 and In re Chapman, 148 USPQ 711. The showing of unexpected results must be occurred over the entire claimed range. In re Clemens, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980). The scope of the showing must be commensurate with the scope of the claims. In re Tiffin, 448 F.2d 791, 792 (Fed. Cir. 1971), In re Coleman, 205 USPQ 1172, and In re Greenfield, 197 USPQ 227.

19. Applicants argue that the instant claims 24 and 25 require Si, Mn, and Ti. But, said claims require Si, Mn, and Ti in amounts to the extent that would satisfy the formula, which include zero.

20. Applicants argue that the claimed Mo content is critical. But, applicants have not substantiated their position with factual evidence in declaration.

21. Applicants' argument in page 4, item V. of the instant remarks is noted. But, said Japanese patent document teaches to nitride treating maraging steel includes maraging steel of Pinnow and other maraging steel references.

#### *Conclusion*

22. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire



THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

23. Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See MPEP § 2163.06 (a) and 37 C.F.R. § 1.119.

*Examiner Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (703) 308-2542. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (703)-308-1146.

The facsimile phone number for this Art Unit 1742 are (703) 305-3601 (Official Paper only) and (703) 305-7719 (Unofficial Paper only). When filing a FAX in Technology Center 1700, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file, and "Unofficial" for draft documents and other communication with the PTO that are not for entry into the file of the application. This will expedite processing of your papers.

S. Ip  
August 10, 2003

  
SIKYIN IP  
PRIMARY EXAMINER